

National Tsunami Hazard Mitigation Program (NTHMP)

FY 2005 DART BUOY NETWORK BUDGET PLAN

(November 1, 2004)
revised

OPERATION and MAINTENANCE of DART BUOYS

OPERATIONAL MANAGER: Kathleen C. O'Neil (NDBC)

DESCRIPTION:

Maintain the Deep-ocean Assessment and Reporting of Tsunamis (DART) Network in a high state of operation.

PLANS/MILESTONES:

- Operate and Maintain the existing 6 DART stations
 - Contracted vessel to service/repair stations 46401, 46402 and 46404 Early Nov 04
- Process and display DART data with additional data products
 - Test and implement de-tiding algorithm for DART data
 - Post DART station performance statistics, raw data, "housekeeping data"
- Maintain documentation of DART systems.
 - Finalize test procedures for components, systems, complete DART system
- Evaluate impact of transitioning the prototype DART system with bi-directional data communications into operational DART network.
- Continue DART system R&D effort with Pacific Marine Environmental Laboratory (PMEL), including improving bi-directional systems.
- Explore the feasibility of combining DART and traditional NDBC buoy requirements on a single platform.

DELIVERABLES:

- Complete November 2004 service visits to 46401, 46402 and 46404
- Maintain the Deep-ocean Assessment and Reporting of Tsunamis (DART) Network at a goal-targeted 80% operational data availability
- Finalize plans for service visits to 6 DART systems in Summer FY05.
- Process, archive and post near real-time data
- Perform statistical performance analysis for operational DART stations
- Post additional data products – raw data, housekeeping data, de-tided data – on the web
- Finalize prototype DART system design and transition to NDBC

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O&M DART NETWORK BASE FUNDING (existing 6-station network) : **\$940K**

Travel	\$ 40K
Shipping of equipment	\$ 80K
Argos fees	\$ 30K
Equipment prep - labor	\$140K
Field service – labor	\$120K
Data processing, analysis, display	\$ 80K
Data product enhancement	\$ 35K
Eng Support	\$135K
Equipment/Parts	\$250K
- batteries	\$ 50K
- cables	\$ 30K
- consumable parts	\$ 40K
- moorings, anchors	\$ 50K
- acoustic releases refurb	\$ 20K
- acoustic modems	\$ 20K
- sensor refurb/repair	\$ 20K
- other equipment	\$ 20K
Contingency	\$ 40K

ENHANCEMENTS : **\$640K**

Complete prototype Next-Gen DART	\$240K
System design/documentation	\$ 70K
Field Testing of prototype	\$ 20K
Deliver 1 complete prototype	\$ 75K
Buoy hull, battery design	\$ 30K
Software	\$ 15K
Engineering support for transition	\$ 30K
Acquire 2 “Next Gen” DART system for 2006 deployment at existing DART stations	\$ 300K
note: additional buoys can be acquired pending availability of funds	
Develop and implement hardware/software for bi-directional data communications	\$ 100K